“Neck Sparing Total Hip Arthroplasty In The Osteoporosis Patient”

T. McTighe1, D. Brazil2,


Acknowledgement: Lafayette de Azevedo Lage, MD2,3; & TSI™ Study Group2

AIMS:
Architectural changes occur in the proximal femur after THA and can lead to implant loosening and or breakage.

Our aim was to review total hip patients with osteoporosis treated with a novel short curved neck sparing (neck stabilized) total hip stem as to their short-term outcome.

Materials and Methods:
A retrospective review of patients who underwent primary total hip arthroplasty that were classified as Dorr type C bone.

A total of 1225 stems have been implanted between April 2010 and April 2012 by 25 different surgeons. 500 stems have been implanted by the Co-Authors.

Typical patient profile showed two-thirds being female with an age range overall between 17 to early 90s. Majority were treated for OA with 100 patients classified as Dorr type C bone.

All surgeons are at different locations and all underwent specific training to familiarize themselves with the stem design and required surgical technique. All seven were part of the initial surgical team to aid in designing and fine tuning of surgical instruments.

Results on all 1225 Stems

Type C Dorr Bone Results (from original 100 patients)

One patient has subsided 8-10 mm (stem has stabilized) however, is still meeting with some mild hip pain associated with activity and is being watched. Potential revision.

Six of the seven surgeons feel that these patients (with this short curved neck sparing stem) have gotten back to full weight bearing and a full active life style quicker than their conventional cementless THA. One surgeons gauges them as equivalent to his conventional stems. All feel that there is less blood loss and operative times have been reduced.

We are encouraged with our initial clinical / surgical observations (patients are happy) and believe the potential and real benefits warrant not only further evaluation but expanded evaluation of this tissue conserving approach to THA.

Dorr type C bone or osteoporosis does not appear to be a contraindication but caution is called for ensuring a stable fit at the femoral neck cut is made.

Surgical Technique Tips:

1. Level of neck resection.
2. Angle of neck resection.
3. Rasping not broaching the proximal medial curve.

Results on all 1225 Stems

Anterior Approach
Dislocations = 2
Stem Revisions = 3
Aseptic Loosening =1
Superficial Infection = 2
Septic Loosening = 0
Septic Pending Explant = 0
Leg length discrepancy +/- 7 mm = 7
Fractures distal = 0
Occult Fx distal end of the stem =1
Calcar Fxs. wired = 2
Calcar Fxs. not wired = 3
Hill Pain = 2
Subsidence >5mm = 3
Intra-op femoral perforations = 3
Mismatch heads = 2
(required revision surgery for head correction)

Posterior Approach
Dislocations = 4
Stem Revisions = 3
Aseptic Loosening = 0
Superficial Infection = 0
Leg length discrepancy +/- 7 mm = 7
Fractures distal = 0
Calcar Cracks wired = 1
Calcar Cracks not wired = 2
Hill Pain = 1 (being watch)
Subsidence >5mm = 0
Intra-op fractures resulting in stem bailout = 0
Head / neck disassociation = 1

Note: All stem revision were revised to standard length primary cementless stems.

JISRF Study Group Members /2* Surgical Team
Tissue Sparing Implant™ (TSI™) Total Hip Stem Designs
Rua Lisboa 144, apto 191-A
05413-000 San Paulo, SP Brazil
www.jisrf.org

1 Timothy McTighe, Dr. H.S.  (hc) Executive Director Joint Implant Surgery & Research Foundation
2 JISRF Study Group Members / 2* Surgical Team Tissue Sparing Implant™ (TSI™) Total Hip Stem Designs
3 Rua Lisboa 144, apto 191-A 05413-000 San Paulo, SP Brazil www.jisrf.org